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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 21 1985

PMSP
0066-A
OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP# OE2409; Benomyl use on Garden Beets. Amendment of July 19, 1982 (RCB#829) (No Accession No.)

FROM: Philip Errico, Chemist *Philip Errico*
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

THRU: Karl Arne, Acting Section Head *Karl Arne*
Tolerance Petition Section III
Residue Chemistry Branch
Hazard Evaluation Division (TS-769C)

TO: Hoyt Jamerson, PM# 43
Emergency Response Section
Registration Division (TS-767C)

Revised Sections B and F, submitted by the petitioner in July of 1982, have just been received by Residue Chemistry Branch for review. These revised Sections were submitted in response to the deficiency in our review of July 26, 1982. In this review we stated that RCB could recommend for the requested tolerances of 0.2 ppm in/on garden beet roots and 15 ppm on beet tops, if the petitioner would change the proposed use to include a restriction against the feeding of beet tops to livestock. The revised Section B includes the restriction "Do not feed beet tops to livestock". This deficiency is now corrected.

The petitioner has also submitted a revised Section F which includes a tolerance of 2 ppm for residues of benomyl and its metabolites containing the benzimidazole moiety in the liver of cattle, goats, hogs, horses, and sheep. This requested tolerance of 2 ppm in livestock liver is not appropriate and should be withdrawn (see PP# 6F1748, P. Errico, May 9, 1984).

The benomyl registration standard has been signed and completed by Residue Chemistry Branch; the standard has not been finalized by the Agency (R. W. Cook, PP#7E2007, 5/23/85). The data gaps have been adequately described in the above memo by R. W. Cook.

The conclusions of registration standards are to be considered for all permanent tolerance requests. A registration standard is complete for Residue Chemistry Branch purposes when the residue chemistry section is in its final form, even though the remainder of the standard may not be complete.

No adequate root metabolism studies are available. In addition to metabolism studies on three other crops, a metabolism study on benomyl foliarly treated sugar beets is required by the standard.

The standard also requires storage stability studies for any commodity stored frozen for greater than 9 months before analysis. The majority of samples submitted in this petition were stored frozen (-20°C) no longer than about 8 months. Therefore this requirement has been met.

In the original review of this petition (A. Smith, 2/3/81), it was concluded that insufficient data was submitted to support this tolerance request, and sugar beet residue data was translated to support our tolerance recommendations. The standard has stated in the conclusions for both sugar beet roots and tops that "Sufficient data are available to assess the adequacy of the established tolerances and label directions". But then continues to note "The conclusions stated here are tentative. On submission of the data required in the sections entitled "Nature of the Residue in Plants", "Residue Analytical Methods", and "Storage Stability Data", the available data for this crop may be subject to reevaluation which could result in the requirement of additional data." Because of the questions raised we are no longer prepared to translate residue data from sugarbeet roots and tops to garden beets.

Conclusions and Recommendations

We cannot recommend for the requested tolerances in garden beet roots and tops. For additional consideration we will need:

1. A plant metabolism study in sugar beets as required in the final report of the benomyl registration standard (Task 2: Residue Chemistry Data, July 13, 1984).
2. Additional residue data for garden beet tops and roots using the maximum rate and applications, and minimum PHI. This data may not be needed if the required registration standard data will support the established tolerances for sugar beet roots and tops and thus allow RCB to translate these data in support of the proposed use on garden beets.

3. A revised Section F withdrawing the requested 2 ppm tolerance for benomyl and its metabolites of concern in liver.

Additional Comments. The required plant metabolism study may be beyond the capabilities of this petitioner. We could reevaluate this tolerance request once the required studies for benomyl use on sugarbeets are satisfied.

RCB:TS-769:P.Errico:vg:CM#2:Rm810:X77377:6/14/85

cc: R.F. Circu, Errico, Reviewer, TOX, EEB, EAB, PP# OE2409 FDA,
Robert Thompson, PMSD/ISB ~~K. Arne~~

RDI: R. Schmitt, 6/10/85; ~~R. Quick~~, 6/10/85;